

Archaeological Survey

River Rock Ranch

+/- 50 Acres

San Antonio, Texas

February 1, 2007

FGS Control # FGS-07113

Prepared exclusively for

Green Land Ventures

505 Madison Oak

San Antonio Texas 78258

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Restricted Cultural Information

According to the Texas Administrative Code: TITLE 13: CULTURAL RESOURCES, PART 2, TEXAS HISTORICAL COMMISSION, CHAPTER 24, RESTRICTED CULTURAL RESOURCE INFORMATION, RULE §24.3 Scope: "The intent of these rules is to restrict access to specific cultural resource data to those individuals that have a legitimate scientific or legal interest in obtaining and using that information. The intent is not to limit the public's use of all information that the commission has within its libraries, files, documents, and the THSA database; however, as provided for in §442.007(f) of the Texas Government Code, and §191.004(a-c) of the Texas Natural Resources Code, the commission can determine what cultural resource information is sensitive and what information needs to be restricted due to potential dangers to those resources. The cultural resources that the commission considers to be at risk include Archaeological sites, shipwrecks, certain historic structures and engineering features. Public disclosure of any information relating to the location or character of these resources would increase their risk of harm, theft or destruction. Therefore, this information is defined as restricted and is not subject to public disclosure under state law. Restrictions on who can obtain data and how the data are used is within the legal authority of the commission, and can be defined through the rule-making authority of the commission."

As a result, it must be noted that the information contained within this report cannot be made available to the general public and additional copies of this report and the attached maps are not permissible without the written consent of Frost GeoSciences, inc. and Abasolo Archaeological Consultants.

Site Location

The project site consists of +/- 50 acres of undeveloped land located along and north of Boerne Stage Road west of Leon Springs, Texas. The approximate Latitude/Longitude for the center of the project site is Latitude: N 29° 40' 56.10", Longitude: W 98° 39' 40.50". The location of the project site was obtained using the 1983 North American Datum (NAD83). An overall view of the area is shown on a copy of the Site Plan, a local street map, a USGS Topographic Map, a geologic map, as well as on historic & current aerial photographs. Copies of the above mentioned maps indicating the location of the project area are presented on Plates 1 through 13 in Appendix A.

Geologic Map Review

Geologic formations capable of being a source bed for flint/chert make favorable sites for prehistoric and historic cultures. These same formations will produce flint/chert gravels within streambeds that drain the areas covered by the formations. Caves and cliff overhangs would have the potential to provide shelter for prehistoric and historic nomadic hunting tribes. Some areas with the potential for vertical caves can make suitable mortuary depositories for the dead dating back as much as ca. 8,000 years. The caves will be primarily restricted to areas with carbonate strata such as limestones and chalk formations.

According to the Bureau of Economic Geology, San Antonio Sheet, the majority of the project site is located on the Glen Rose Formation of the Edwards Limestone (Kgru.Kgrl), while the area of Leon Creek exhibits Quaternary Fluvatile Terrace Deposits (Qt).

The Glen Rose Formation consists of limestone, dolostone, and marl as alternating resistant and recessive beds forming stairstep topography. The limestones are aphanitic to fine grained, hard to soft and marly, and light gray to yellowish gray. The dolostones are fine grained, porous, and yellowish brown. Marine megafossils include molluscan steinkerns, rudistids, oysters, and echinoids. The upper unit is relatively thinner bedded, more dolomitic, and less fossiliferous than the lower unit. A *Corbula* fossil bed separates the units. Overall thickness of the upper unit is approximately 400 feet. The lower unit is more massive, contains some rudistid reefs and has abundant steinkerns of *Corbula harveyi*. Overall thickness of the lower unit is approximately 500 feet. The Del Rio Clay is a calcareous and gypsiferous, blocky medium gray clay. Typically this formation becomes less calcareous and more gypsiferous near the upper contact. This formation often contains thin lenticular beds of highly calcareous siltstone. Pyrite nodules are common. Marine megafossils include abundant *Exogyra arientina* and other pelecypods.

The Quaternary Fluvatile Terrace Deposits consists of gravel, sand, silt, and clay. The gravel is predominantly limestone, dolostone, and chert. These low terrace deposits are mostly above the flood level along entrenched streams. The fluvatile morphology is well preserved with point bars, oxbows, and abandoned channel segments.

A copy of the above referenced geologic map indicating the location of the project site and the geologic formations is included in this report on Plate 4 in Appendix A.

Historic Aerial Photography

Historic aerial photography from 1938 indicates that no structures are visible on the project site at this time. Based on a review of the historic aerial photography, the project site appears to consist primarily of undeveloped land with a small area of farm land in the southwestern portion of the project site. A copy of the historic aerial photography is included on Plates 5 through 13 in Appendix A.

U.S.D.A. Soil Survey Review

According to the U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of Bexar County, Texas (1966), the majority of project site is located on the Crawford and Bexar Stony Soils (Cb), while the fallow field in the southeastern portion of the project site consists of the Patrick Soils (PaB) and the area of Leon Creek is made up of the Trinity and Frio Soils, Frequently Flooded (Tf).

The Crawford and Bexar Stony Soils (0-5% slopes) (Cb) are very dark grayish brown to reddish brown clay. They are stony clay in texture and are shallow to moderately deep over hard limestone. These soils are extensive in the northern part of the county. The surface very dark gray to dark reddish-brown, noncalcareous clay and is about 8-9 inches thick. Approximately 10-40% of this layer consists of limestone and chert fragments, with fragment sizes ranging from ¼-inch to nearly 24 inches across. The subsurface layer generally contains a few chert fragments of small flags of cherty limestone. This soil is naturally well drained. Internal drainage and permeability vary according to moisture content. Water moves rapidly when the soil is dry and cracked, but very slowly when the soil is wet.

The Patrick Soils, 1-3% slopes (PaB) consist of shallow, dark colored nearly level and gently sloping soils. These soils occur as terraces along streams that drain the limestone prairies of the county. Typically, the surface layer is clay loam, gravelly clay loam, silty clay, or light clay and is about 12 inches thick. The subsurface layer, which is about 5 inches thick, is brown clay loam, loam, or light

clay. This layer also has a granular structure. Permeability is moderate. Natural fertility is moderately high. In the more sloping parts, these soils are susceptible to water erosion.

The Trinity and Frio Soils, Frequently Flooded (Tf) occur as narrow, long and irregularly shaped areas on the flood plains of small streams and the larger field drainageways. They are mostly in the northern and central parts of the county. These soils are flooded at least once a year, generally after a heavy rain. Some areas are subject to a thin deposition of sediments, and others to scouring or shifting. Channels in these areas are poorly defined and of small capacity. The surface layer ranges from clay loam to gravelly clay in texture. The subsurface layer is clay, but in places it contains thin loamy strata. These soils are typically 3-5' deep.

A copy of the 1962 Aerial Photograph from the U.S.D.A. Soil Survey of Bexar County, Texas (1966) indicating the location of the project site and the soil types is included in this report on Plate 7 in Appendix A.

Abstract

Abasolo Archaeological Consultants (AAC), in conjunction with Frost Geosciences, Inc. conducted a Phase I archaeological survey of +/- 50 acres on the River Rock Ranch development. The focus of the survey was on those areas deemed to have a high probability for archaeological sites. The survey included a pedestrian inspection of 100% of acreage along the floodplain at the juncture of Leon Creek and an unnamed tributary of Leon Creek. The unnamed tributary of Leon Creek is also designated as a high probability area for archaeological sites. One archaeological site, 41BX1721, a small burned rock midden associated with a light occupation area was recorded during the survey. The archaeological site and the occupation area do not merit further investigations. No further archaeological work is recommended.

Introduction

Abasolo Archaeological Consultants and Frost GeoSciences, Inc. conducted an Archaeological

survey of areas at the River Rock Ranch development that were deemed as high probability locations for archaeological sites (Fig.1). The survey plan was based on a request from the City of San Antonio Historic Preservation Office. These areas were covered on foot by a 3-person survey on a +/- 50 acre portion of the development, located along the designated floodplain at the juncture of Leon Creek and an unnamed tributary of Leon Creek. Field work was conducted on January 5, 2007 by Dr. Harry Schafer Ph.D., Dr. Tom Hester Ph.D. (of Abasolo Archaeological Consultants) and Brian Culver of Frost GeoSciences, Inc. The work was carried out in accordance with the "Archaeological Survey Standards for Texas" to insure that no archaeological or historical resources eligible for nomination to the National Register of Historic Places are damaged or destroyed due to the planned construction. This Phase I investigation is designed to detect and record any archaeological or historical resources that may be present in the project area, assess the potential of any resources encountered, and to recommend Phase II investigations if deemed necessary for further evaluation.

All Archaeological material encountered during the survey was located using hand-held GPS units and plotted on the project map. No backhoe testing or shovel tests were needed, as discussed later in this report.

The portion of the property surveyed exhibits considerable topographic relief (Fig.1). The property incorporates part of the Leon Creek valley, located on the southern boundary of the project site, and is drained by a northern lateral tributary and Leon Creek. The portion of the property surveyed is vegetated by dense juniper, oak and cedar elm forest with the exception of the terrace along Leon Creek which is a fallow field. Leon Creek and the unnamed tributary of Leon Creek do not hold permanent water along this section. Very little of the surveyed property was actually floodplain. Rather, the terrain consisted of forested slopes, rocky hillsides, and limestone benches.

The geology is dominated by Cretaceous Comanche series Trinity limestone (Sellards et al; 1966: Pl XI). Soils derived from this limestone are shallow with the exception of recent floodplain deposits at the confluence of the unnamed lateral tributary and Leon Creek; here the soft, recently deposited soils are over a meter thick. The soils, as described in Taylor et al. (1991), on the upland slopes are shallow

Crawford and Bexar stony soils while those of the terrace field are Patrick soils (1 to 3% slope).

The survey party was prepared to excavate shovel and backhoe test pits in settings suspected of having buried intact archaeological deposits. With the exception of the terrace bordering Leon Creek and the narrow floodplain of the lateral tributary, the area surveyed consisted of exposed limestone and shallow stony soils which were not conducive to testing. The terrace along Leon Creek consisted of shallow soils overlying gravel deposits. Both natural and recent disturbances of the soils showed very shallow Holocene deposits, again negating the need for subsurface testing.

Archaeological Background

Regional Culture History

The broad outline of the archaeology of northern Bexar County can be discerned. Major time periods and site types are briefly noted here.

The Paleo-Indian period, 9,200-6,800 B.C., has distinctive chipped stone spear points used in hunting mammoth and other late Ice Age mammals early in the period. Other spear types appear with a shift to bison, deer and other game after the Ice Age ended around 8000 B.C. (Hester 1986). Known site types in northern Bexar County are campsites with flint-chipping debris from stone-tool making and repair. One site of Clovis age (9,200 B.C.) was excavated near FM1604 and Leon Creek (Collins et al., 2003). A later site, dating around 7,500 B.C., was investigated on the grounds of St. Mary's Hall on Salado Creek (Hester 1986).

Sites of the following Archaic period are common in northern Bexar County. These peoples were hunters and gatherers as in the earlier Paleo-Indian period, but lived in an environment very similar to those of modern times. Projectile points used to tip spears (often erroneously called "arrowheads") change in shape through time, from 6,800 B.C. to 500 A.D. (Turner and Hester 1993). Archaeologists use these forms to recognize more specific time frames within the Archaic (e.g., Early, Middle and Late Archaic). In northern Bexar County, the most distinctive Archaic site is the burned rock midden. These

large accumulations of fire-cracked limestone result from the use of earth-oven cooking starting around 3,000 B.C. (Black et al., 1997; Nickels et al., 2000). Such features were part of larger campsites, with large amounts of flint debris from tool-making; sometimes, animal bone (dietary remains) and charcoal that can be used for radiocarbon dating. Other Archaic site types include lithic procurement areas (where flint cobbles eroded out of the Edwards limestone and were processed), lithic scatters (lightly-used areas probably representing short-term hunting and gathering activities), and rarely, sinkhole burials (Archaic peoples often disposed of their dead by placing them in sinkholes and caverns (Bement 1994).

By 700 A.D., there began to be some changes in the long hunter-gatherer lifeway. The Late Prehistoric is first seen with the introduction of the bow and arrow. The stone arrow points are very small (mistakenly called "bird points"), but could be used in hunting game of any size. By 1300 A.D., the economy emphasized buffalo-hunting. Most sites of this era include campsites, often in areas previously used by Archaic peoples, lithic scatters of this age; and the lithic procurement areas of earlier times continued to be used.

During the Historic period, the best known archaeological remains are ranch and farm houses of cut stone, dating from the 1840s through the 1880s. Stacked- stone fences also occur. Such sites, including those without surviving structures, are recognized from 19th century pottery fragments, artifacts of glass and metal, etc. Later Historic houses and farmsteads, through the early 1900s, are also found.

The upper portion of the Leon Creek Valley is poorly known archaeologically, due perhaps to two factors: a lack of permanent spring water and a lack of archaeological attention. Numerous sites are known in the lower Leon Valley, around and below the artesian springs feeding the creek. We expected that archaeological sites would be present in or near the project area due to the fact that the property included portions of Leon Creek, and confluences of minor streams. Major streams are very high probability areas for prehistoric archaeological sites in central Texas and the Balcones Canyonlands. There are some 15 prehistoric archaeological sites documented downstream according to the Texas Historic Site Atlas. A number of these were recorded in 1970-1971 during a survey of Leon Creek by Paul

McGuff and William Fawcett. In addition, two historic sites, the Obert House (41BX497) and Obert Cemetery (41BX498) are located to the northwest of the project area. One site, Pavo Real (41BX52), was located downstream from the project area and contained the oldest evidence of human occupation in Bexar County yet recorded (Collins et al. 2003). Given the rich archaeological history of northern Bexar County, finding some trace of prehistoric occupation was expected in alluvial deposits on both sides of the creek and perhaps on the slopes of the unnamed tributary into Leon Creek.

Survey Findings

As noted earlier, the survey party expected to find a major archaeological site at the juncture of Leon Creek and the unnamed tributary of Leon Creek. What we found was a terrace of very shallow soils with only a trace of burned rock along the east end of the fallow field. No buried deposits were evident based on creek bank exposures and a large trash pit excavated in the eastern portion of the field. The only other evidence of prehistoric archaeology was a small burned rock midden associated with a light occupation area on the upland point north of Leon Creek and west of the unnamed tributary. This upland point overlooks the fallow field below. The site is described below.

41BX1721

There are two features at the site, a small burned rock midden located on the top of a point and a hearth located on the limestone bench below the point. The areas encompassing these features exhibit a light scatter of fire-cracked rock. The GPS location for the burned rock midden is Zone 14 0532684E / 3283165N. The midden is approximately 10 meters in diameter and probably no more than 20 cm thick, although the size could be larger as visibility in the juniper thicket in which the midden was located was poor. The upland point drops down onto three limestone shelves, and fire-cracked rock trails down onto each. A well defined hearth was noted on the shelf immediately below the midden. The hearth consisted of a tight cluster of fire-cracked limestone rocks. The cluster was about 60 cm in diameter and was eroding from a shallow soil layer overlying bedrock. No chipped stone artifacts were observed at the site. None of the cultural features warrant further investigation.

References Cited

Bement, L. C.

1994 Hunter-Gatherer Mortuary Practices During the Central Texas Archaic. The University of Texas Press, Austin.

Black, S. L., L. W. Ellis, D. G. Creel, and G. T. Goode

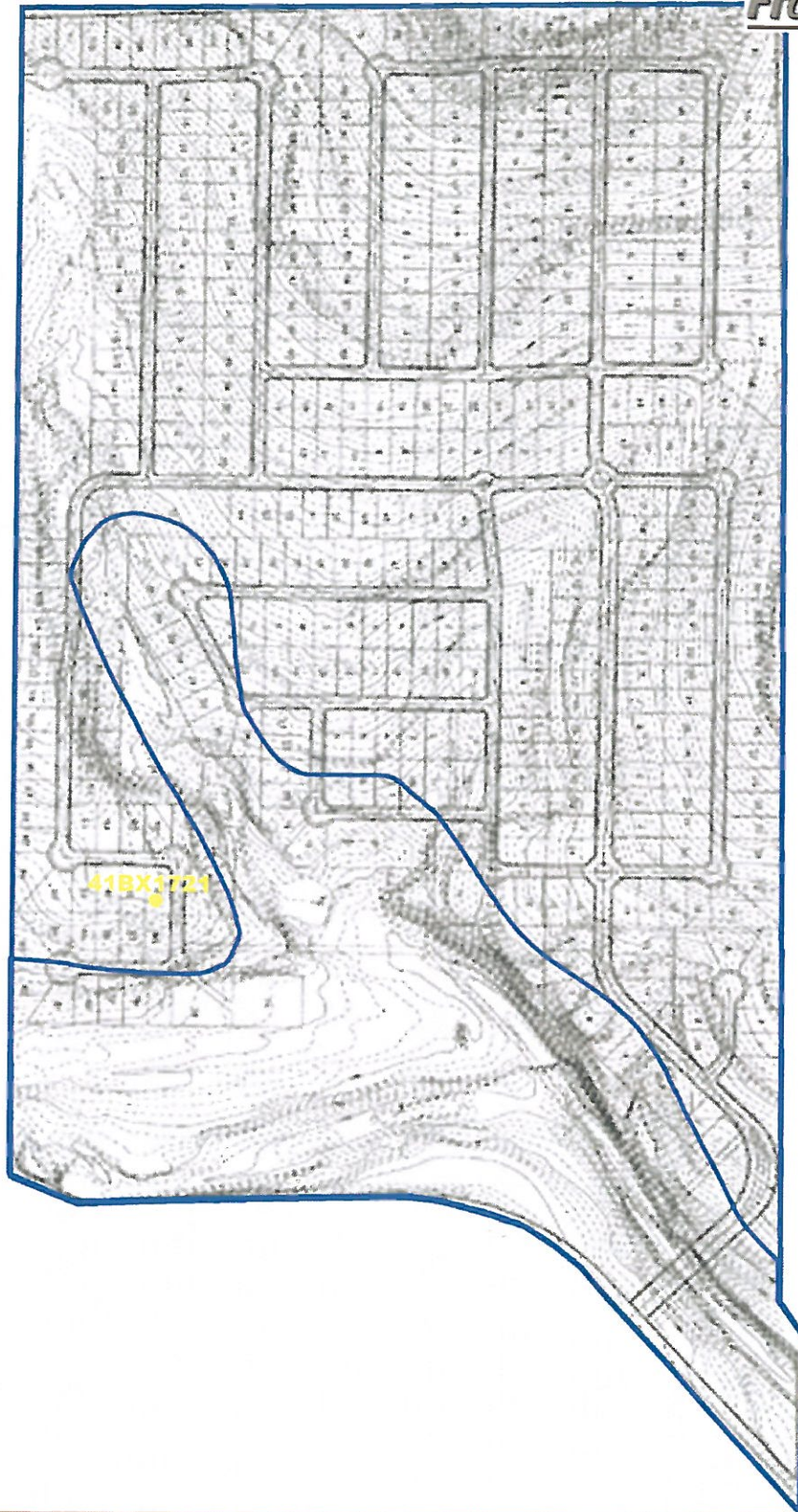
1997 Hot Rock Cooking on the Greater Edwards Plateau: Four Burned Rock Midden Sites in West Central Texas. Two volumes. Studies in Archeology 22, Texas Archaeological Research Laboratory, The University of Texas at Austin, and Archeology Studies Program, Report 2, Environmental Affairs Department, Texas Department of Transportation. Austin.

Collins, M. B., D. B. Hudler, and S.L. Black 2003

Pavo Real (41BX52): A Paleoindian and Archaic Camp and Workshop on the Balcones Escarpment, South-Central Texas. Studies in Archeology 41. Texas Archaeological Research Laboratory, The University of Texas at Austin.

Hester, T. R.

1986 Early Human Populations Along the Balcones Escarpment. In The Shafer, H. J. and T. R. Hester



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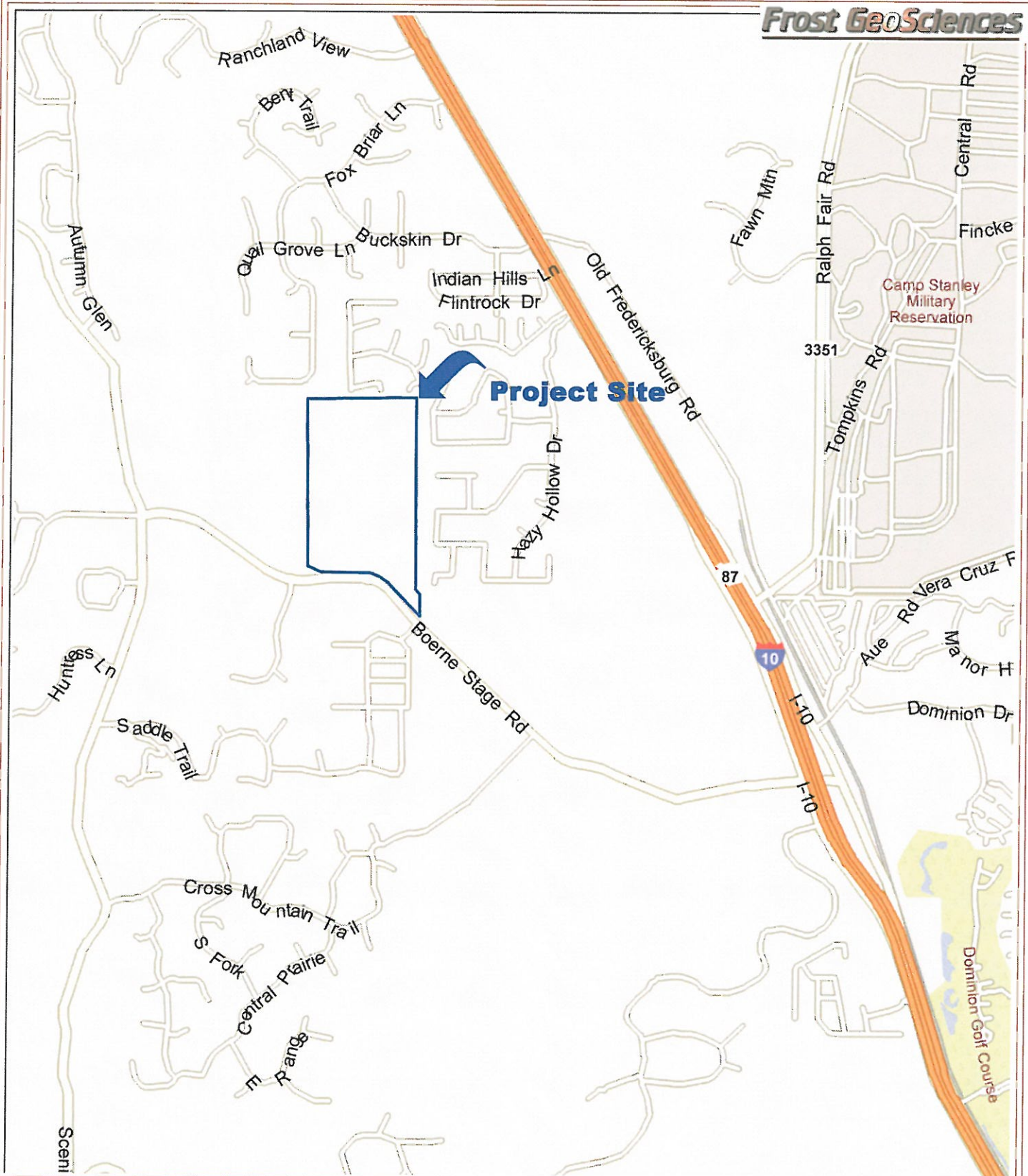
Site Plan

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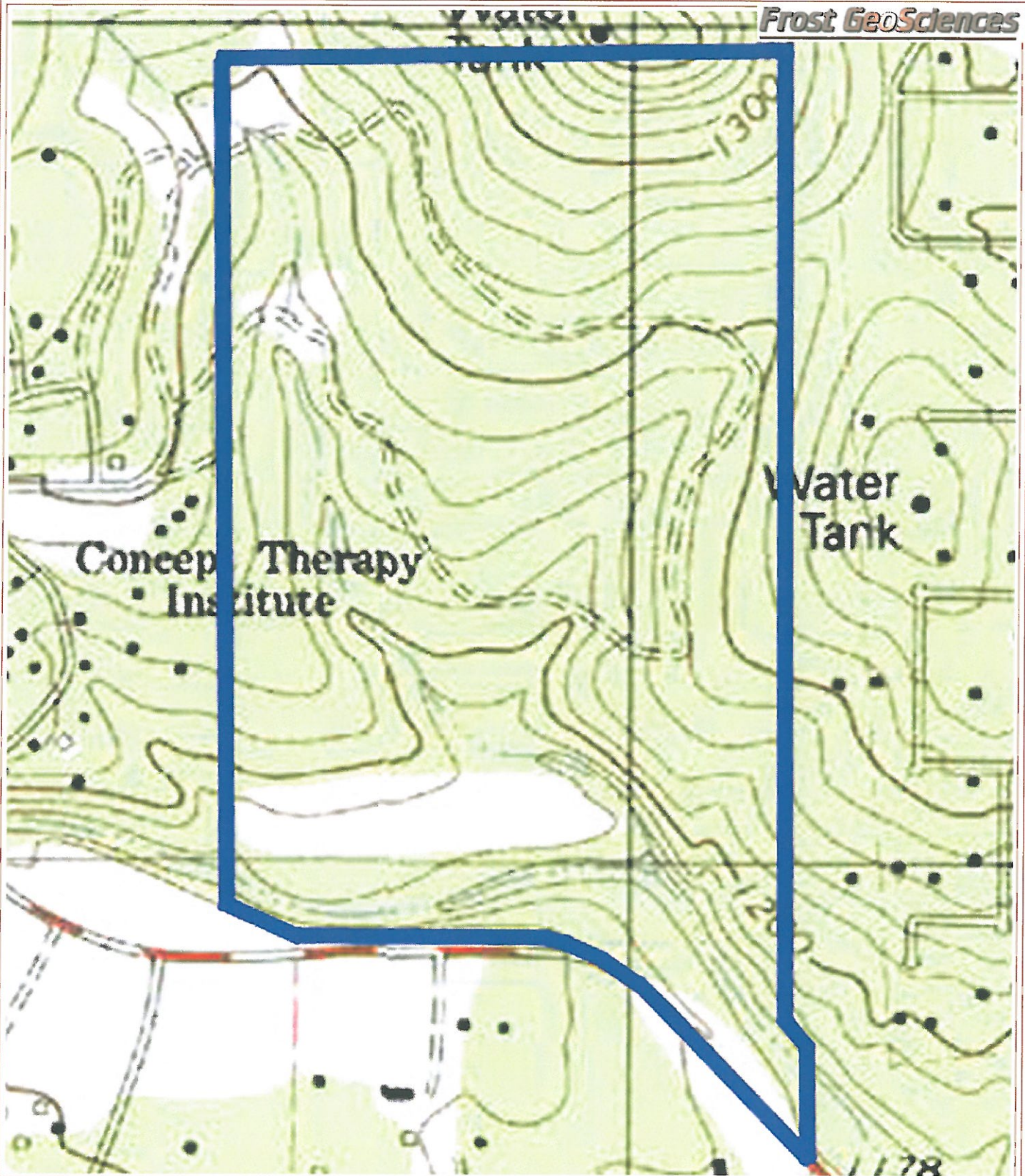
Street Map

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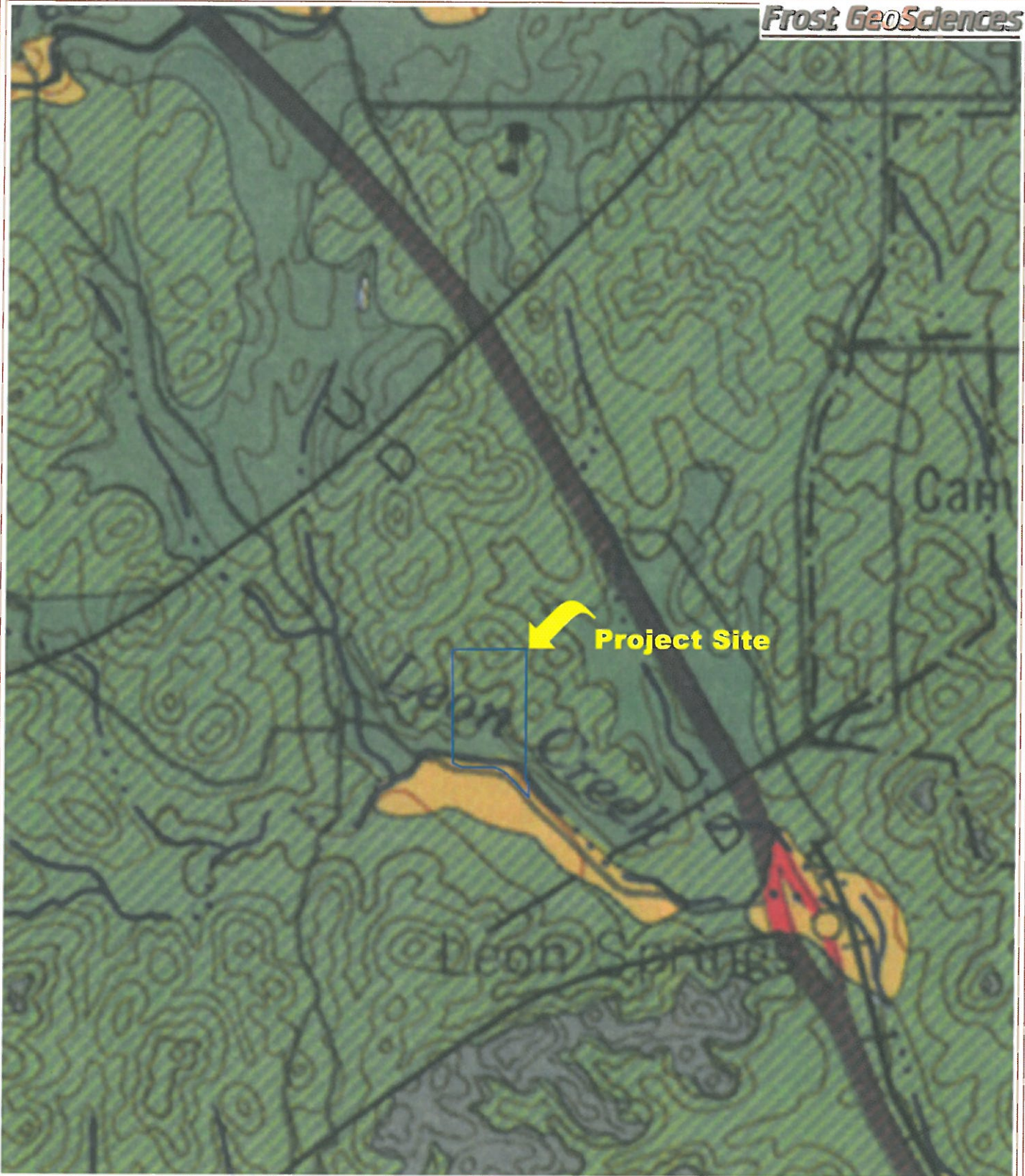
U.S.G.S. 7.5 Minute Quadrangle Map
Van Raub Sheet (1991)

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Bureau of Economic Geology
San Antonio Sheet (1982)

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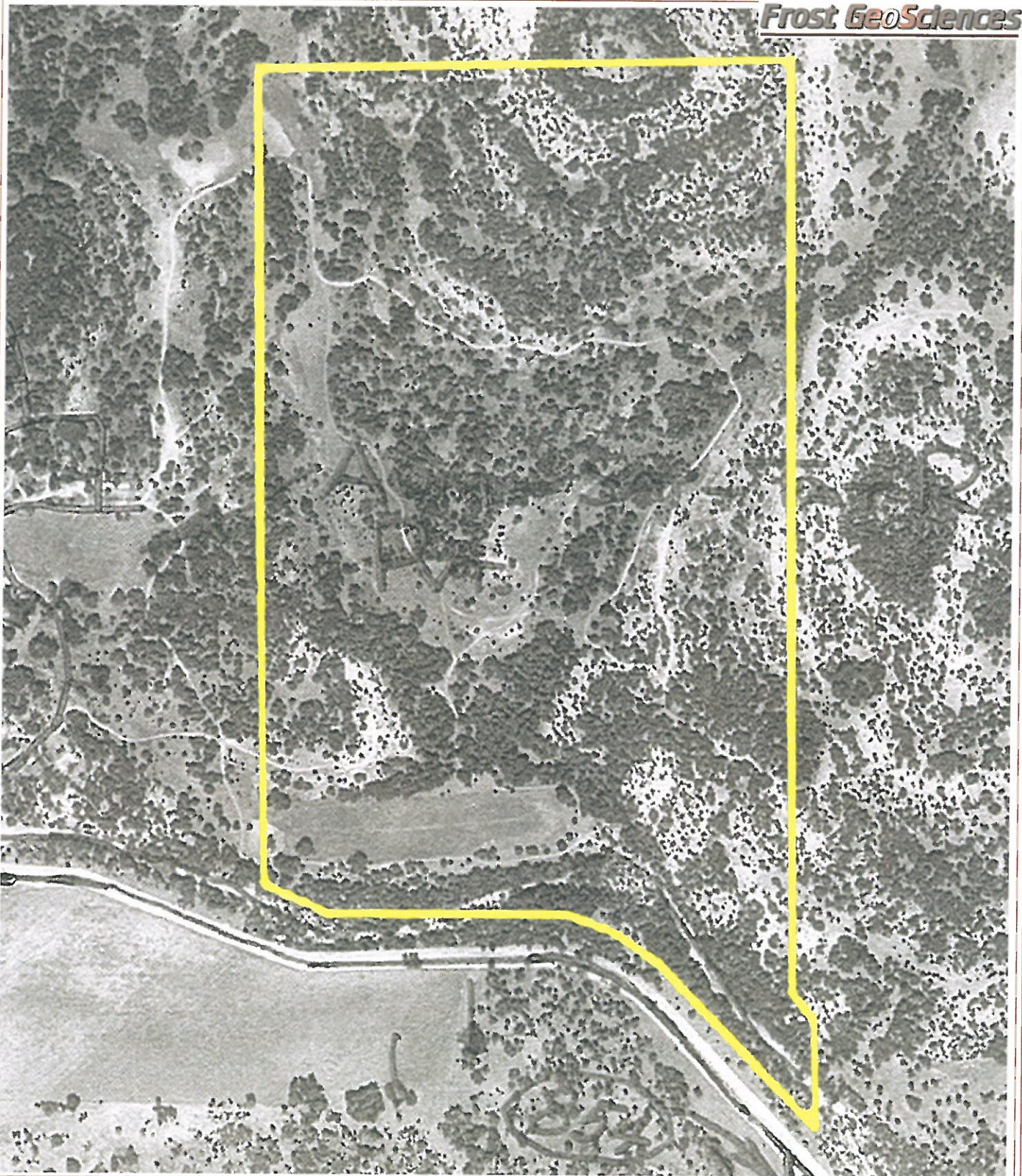
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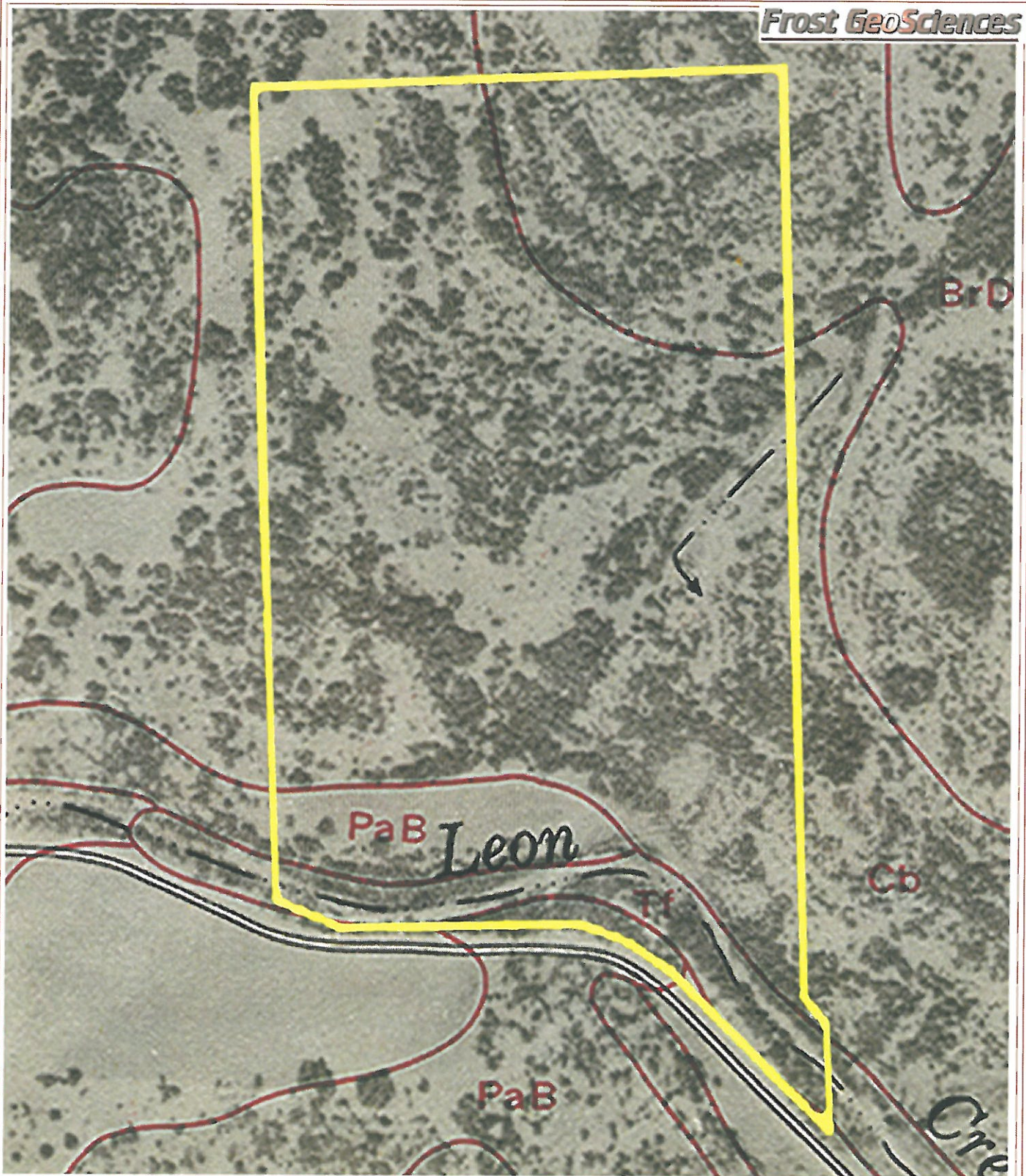
1959 Aerial Photograph
Agricultural Stabilization & Conservation Service

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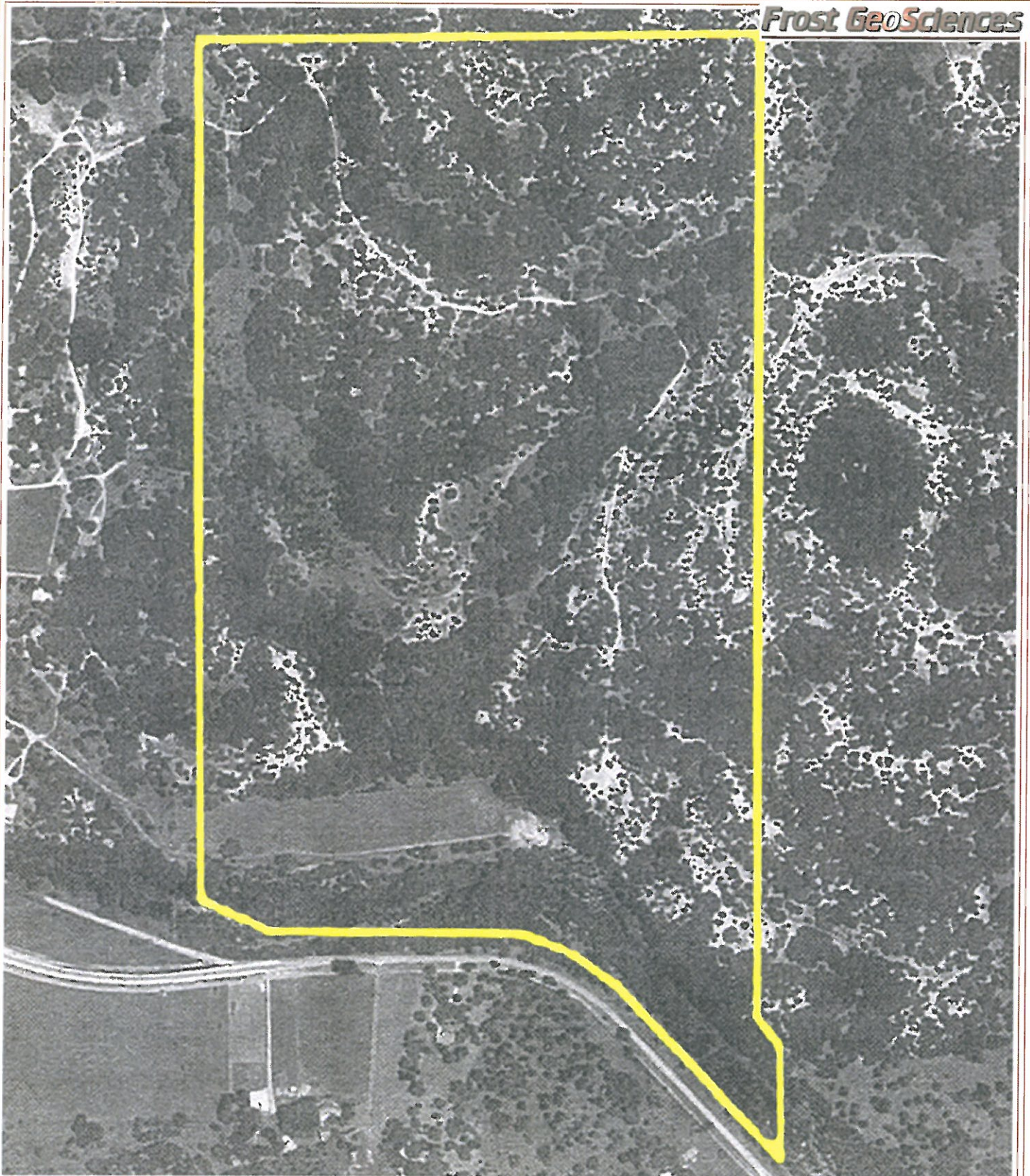
1962 Aerial Photograph
United States Department of Agriculture

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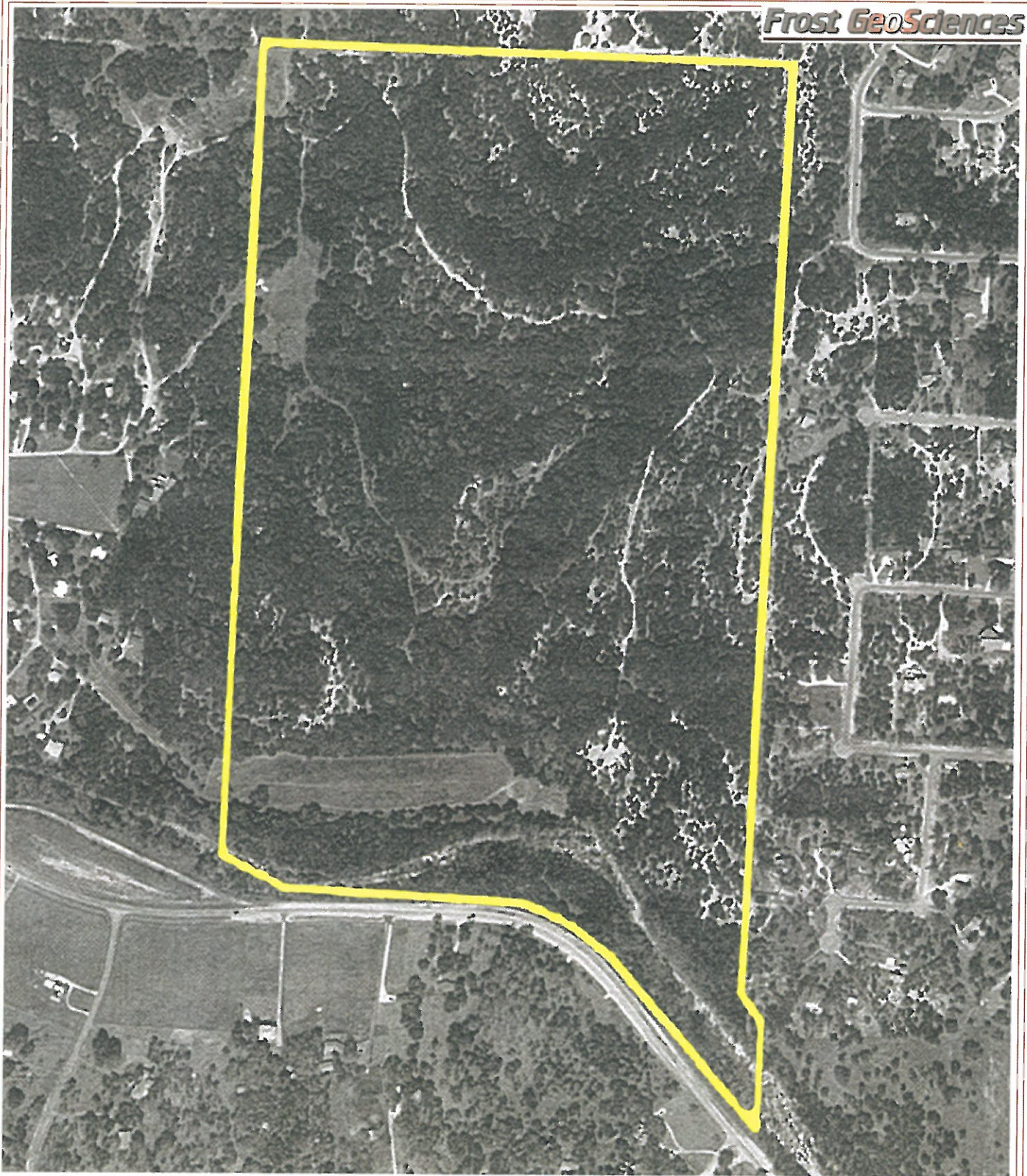
1977 Aerial Photograph
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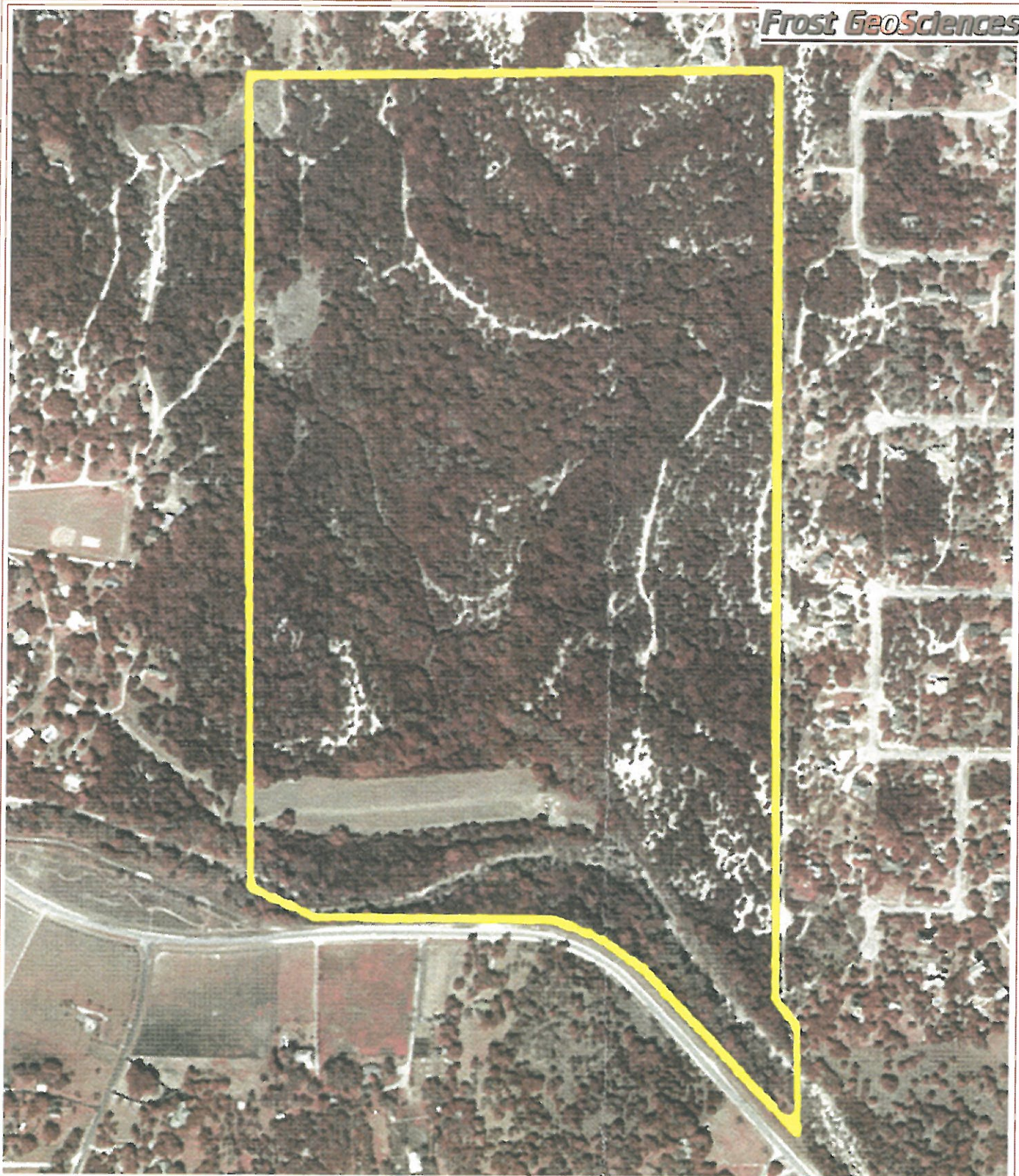
1986 Aerial Photograph
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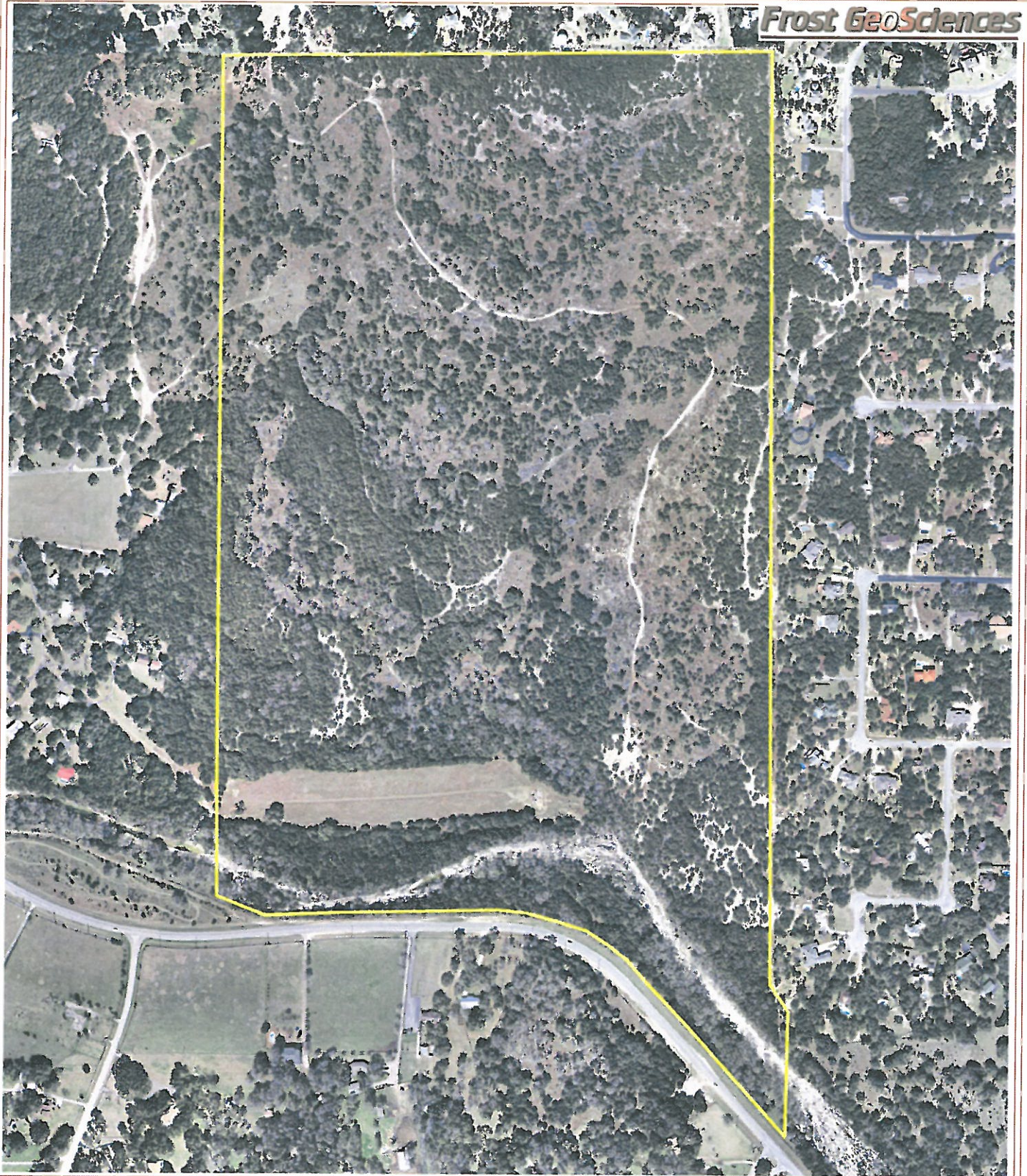
1996 Aerial Photograph
United States Geologic Survey

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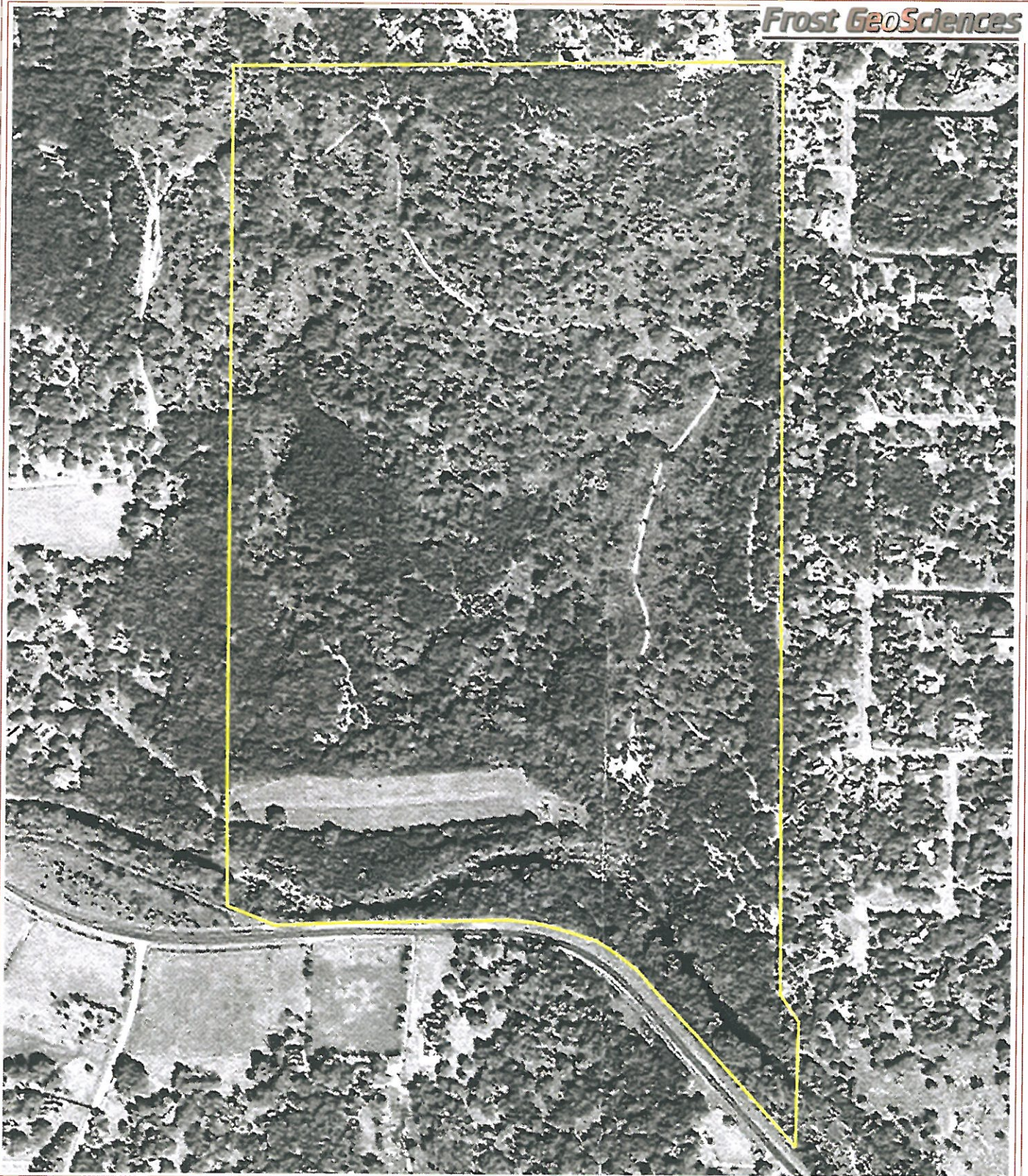
2003 Aerial Photograph
City of San Antonio

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2004 Aerial Photograph
United States Department of Agriculture

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ITEM INTENTIONALLY OMITTED


		
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IMAGE RESTRICTED

Figure 1. Topographic map showing the location of the River Rock development and site 41BX1721.

Figure 1. Topographic map showing the location of the River Rock development and site 41BX1721.



Figure 2. View of Leon Creek at the confluence of the northern lateral on the River Rock Development property.



Figure 3. View on east side of confluence of a northern lateral tributary with Leon Creek on the River Rock development property.



Figure 4. Small burned rock midden at site 41BX721.



Figure 5. Limestone hearth feature at site 41BX1721



Figure 6. Surface scatter of fire-cracked rock at site 41BX1721.